

## ABSTRACT

An antenna assembly having an operating frequency and a vertical radiation pattern with a main lobe axis defining a downtilt angle with respect to the earth's surface. The antenna assembly comprises a plurality of antennas in first, second, and third antenna groups disposed along a backplane, the backplane having a longitudinal axis along which the antennas are disposed, and a phase adjustment mechanism disposed between the second and third antenna groups, such that adjustment of the phase adjustment mechanism results in variation of the vertical radiation pattern downtilt angle.